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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,782	07/11/2006	Andrew Donald Thomas	4601-0114PUS1	1385

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BIRCH STEWART KOLASCH & BIRCH
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EXAMINER

ALI, HYDER

ART UNIT	PAPER NUMBER
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3747

NOTIFICATION DATE	DELIVERY MODE
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08/18/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/585,782	Applicant(s) THOMAS, ANDREW DONALD	
	Examiner HYDER ALI	Art Unit 3747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 7 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 8-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Allowable Subject Matter***

It is regretted that the allowability of claims 1-3 and 7 is withdrawn as indicated by the Examiner in the last office action mailed 03/21/2008 in view of the newly discovered reference(s) to Matsuura et al (US 4,858,577). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuura et al (US 4,858,577).

As to Claim 1, Matsuura et al discloses a rotary valve assembly for an internal combustion Engine (10) comprising: a cylinder head (12 and 13) and an axial flow rotary valve (23) rotatable within a bore in said cylinder head, said valve having a port extending from a peripheral opening on the periphery of said valve to an axial opening at one end of said valve, said peripheral opening periodically communicating with a combustion chamber (15) through a window in said bore as said valve rotates, said peripheral opening having a first trailing edge and said window having a second trailing edge whereby said port closes from said combustion chamber as said first trailing edge passes said second trailing edge as said valve rotates, wherein said first and second trailing edges are disposed such that as said port closes from said combustion chamber the instantaneous intersection point of said first and second trailing edges progressively moves away from said axial opening over at least 50% of the length of said window.

Specifically Matsuura et al discloses rotary valves having ports with opening shapes than when rotated around a cylinder head port would meet

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the limitation of progressively opening or closing the port over at least 50% of the length of the port windows. In particular, see figures 11 and 12. It shows the cylinder head and the rotary valves having circular openings. These openings would progressively close over 100% of their window lengths. In other words, any opening not of rectangular shape would have some form % of progressive closure.

As to Claim 2, Matsuura et al discloses wherein said port is an inlet port.

As to Claim 3, Matsuura et al discloses wherein said first and second trailing edges are disposed such that as said port closes from said combustion chamber the instantaneous intersection point of said first and second trailing edges progressively moves away from said axial opening over substantially the whole length of said window.

As to Claim 7, Matsuura et al discloses wherein the length of said window is at least 60% of the bore diameter of the cylinder that said rotary valve assembly is adapted to suit.

Allowable Subject Matter

Claims 4-6, 8-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see the references of Dokonal 5,392,743; Donaldson, Jr. 5,655,494; Ballard 5,878,707; Bohach et al. 6,308,677; Trentham

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6,578,538; Kruger 4,517,938 and Hansen et al. 5,081,966. Each teach rotary valves having ports with opening shapes than when rotated around a cylinder head port would meet the limitation of progressively opening or closing the port over at least 50% of the length of the port windows.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HYDER ALI whose telephone number is (571)272-4836. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Kirk Cronin can be reached on (571) 272-4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/HYDER ALI/

Examiner, Art Unit 3747

/Stephen K. Cronin/

Supervisory Patent Examiner, Art Unit 3747